leader hook loop 18 and the leader line end 16 having a leader line loop 20. A first movement stop 22 [split shot] is crimped in front of a leader line loop 20 to the leader 13. A second movement stop 24 [split shot] is crimped to the leader 13 about two-thirds of the length. A sliding c-weight 25 is connected to the leader 13 in this area. The c-weight 25 has a first end 28 having a first bore 30 with an external c-weight first slot 32 on one side, and on the opposite side a c-weight second end 34 [having] has a second bore 36 with an external c-weight second slot 38 [on the other side] in which the leader 13 is slid into and attached to the sliding weight 25. At the [other] c-weight second end 34 to the leader hook loop 18 is attached to a swivel 48, a snap 46 and a horizontal unilateral three pronged hook 41.

CLAIMS

Corrections to the defects in the claims 1-38 detailed in the objections in the final Office Summary Action were made in the proceeding. Claims 1-38 are canceled. The revised claims are amended as 40 – 58.

CLAIMS

What I claim as new is as follows:

40. A bottom fish rig comprising:

an elongated leader having two opposite ends, a leader hook end and a leader line end, said hook end having a leader hook loop secured by a leader hook loop lug therein, said line end having a leader line loop leader secured by a leader line loop lug therein,

a first movement stop frictionally connected to said leader adjacent said line end, [said first movement stop is comprised of a crimped split shot,] said first movement stop abuts the leader line loop lug,

a second movement stop frictionally connected to said leader, said

second movement stop located between said first movement stop and said leader hook end, [said second movement stop is comprised of a crimped split shot,] said second movement stop is located approximately one-third of the way from said leader hook end, and approximately two-thirds of the distance from the line leader loop;

a c-weight that could be removed and reinserted without cutting said leader, said c-weight having a substantially c-shape that could slide along the leader for two-thirds of [the] said leader, said c-weight having a first end, said first end having a first bore therethrough, said c-weight having a second end, said second end having a second bore therethrough, said c-weight having a gap from a first slot to said first bore on one side, on the [second] <u>other</u> side said c-weight having a gap from a second slot to said second bore, [said c-weight having a central semi-cylinder longitudinal groove across a bottom c-weight hull therein for the option of] allowing the c-weight to be fixedly connected to said leader;

a swivel connected to said leader hook eye loop;

a snap connected to said swivel; and

a horizontal unilateral three-prong hook connected to said snap, swivel, and leader, said horizontal unilateral three-prong hook has a bent eye and shank in the same plane as a vertical center hook barb and a symmetrical pair of outer hook barbs which are disposed within a 180 degree section, this placement of the barbs causes the hook to lay horizontally and allows said hook to slide upon [the] <u>a</u> lake bottom

without being caught on debris and to flip upright when the leader is being reeled.

41. The bottom fish rig of claim 40 wherein:

said c-weight having a first end with a first slot connected to said first bore on one side ;

said c-weight having a second end with a second slot connected to said second bore on the opposite side;

said c-weight having a central longitudinal groove connecting said first bore, said c-weight hull and said second bore; and

said c-weight having a central longitudinal groove therein for allowing the c-weight to be fixedly connected to said leader.

42. The bottom fish rig of claim 40 wherein:

said c-weight having a first end with a first slot connected to said first bore on one side ;

said c-weight having a second end with a second slot connected to said second bore on the opposite side;

said c-weight having central bores in said first end and said second end to allow the leader to slide freely; and

said c-weight having a first end with an inclined first slot and on the opposite side said second end with an inclined second slot to hinder the leader from working its way out of the c-weight.

43. The bottom fish rig of claim 40 [further comprising] wherein:

said c-weight having central bores in said first end and said second end to allow the leader to slide freely therethrough; and

said c-weight having central bores in said first end and said second end without any slots, [gasp] gaps and spaces on the sides of the bores.

44. The bottom fish rig of claim 40 wherein:

said first movement stop is comprised of crimped split shot; and

said second movement stop is comprised of crimped split shot.

[6. The bottom fish rig of claim 1 further comprising:

a swivel connected to said leader hook loop.]

[7. The bottom fish rig of claim 1 further comprising:

a snap connected to said swivel.]

45. The bottom fish rig of claim 40 wherein:

said horizontal unilateral three-pronged hook has three [welded] horizontal barbs which are disposed within a 180 degree section;

said horizontal unilateral three-pronged hook has a symmetrical pair of outer hook barbs that are slanted upright [but under a 45 degree angle]; and

said horizontal unilateral three-prong hook has a vertically bent eye and shank in the same plane as a vertical center hook barb[; and

said horizontal unilateral three-pronged hook has with large and wide hooks but with a smaller distance from said shank to said eye].

46. The bottom fish rig of claim 40 wherein:

said horizontal unilateral three-pronged hook has a center hook barb that stands erect in the same plane as the shank and eye which are bent upward from the horizontal position; and

said horizontal unilateral three-pronged hook has three equidistant barbs, a center hook barb and a pair of symmetrical outer hook barbs which are oriented within a horizontal 180 degree section[; and

said horizontal unilateral three-pronged hook has one outer hook barb at 30-degrees, the other outer barb will be at 150-degrees].

47. The bottom fish rig of claim 40 wherein:

said horizontal unilateral three-pronged hook has a center hook barb that stands erect in the same plane as the shank and eye which are bent upward from the horizontal position; and

said horizontal unilateral three-pronged hook has a shorter center hook barb and a pair of symmetrical longer outer hook barbs which are located within the 180-degree section[;

said horizontal unilateral three-pronged hook has one outer hook

barb at 20-degrees, the other outer hook barb will be at 160-degrees.]

48. The bottom fish rig of claim 40 wherein:

said horizontal unilateral three-pronged hook has a center hook barb that stands erect in the same plane as the shank and eye which are bent upward from the horizontal position; and

said horizontal unilateral three-pronged hook has a longer vertical center hook barb and a pair of shorter symmetrical outer hook barbs which are located within the horizontal 180-degree section[;

said horizontal unilateral three-pronged hook has one outer hook barb at 45-degrees, the other outer hook barb will be at 135-degrees].

49. The bottom fish rig of claim 40 wherein:

said horizontal unilateral three-pronged hook has a symmetrical pair of outer hook barbs;

if one outer hook barb is 20-degrees, the other outer hook barb will be 160-degrees

if one outer hook barb is 30-degrees, the other outer barb will be 150-degrees;

if one outer hook barb is 45-degrees, the other outer hook barb will be 135-degrees;

50. The [method of the] bottom fish rig of claim 40 [comprising] wherein:

a) a long leader that is approximately 1-½ meters long;

b) a short leader that is approximately 1/4 meter long;

c) a preferred embodiment with a leader that is approximately 1/3 meter long;

d) a long leader that is constructed from wire or [monofilament] fishing line; and

e) a short leader that is constructed from monofilament fishing line or wire.

51. A bottom fish rig comprising:

an elongated leader having two opposite ends, a leader hook end and a leader line end, said hook end having a leader hook loop secured by a leader hook loop lug therein, said leader line end having a leader line loop [leader] secured by a leader line loop lug therein,

a first movement stop frictionally connected to said leader adjacent said line end, [said first movement stop is comprised of a crimped split shot,] said first movement stop abuts a leader line loop lug,

a second movement stop frictionally connected to said leader, said second movement stop located between said first movement stop and said leader hook end, [said second movement stop is comprised of a crimped split shot,] said second movement stop is located approximately one-third of the way from said leader hook end, and approximately two-thirds of the distance from the line leader loop;

a c-weight that could be removed and reinserted without cutting said leader, said c-weight having a substantially c-shape that could slide along the leader for two-thirds of [the] said leader, said c-weight having a first end, said first end having a first bore therethrough, said c-weight having a second end, said second end having a second bore therethrough, said c-weight having a gap from a first slot to said first bore on one side, on the opposite side said c-weight having a gap from a second slot to said second bore, beneath the second bore is a hull hole and a hull hole plug, and said c-weight having a central semi-cylinder longitudinal groove across a bottom of a hollow c-weight hull therein for the option of allowing the c-weight to be fixedly connected to said leader;

[a] the hull hole plug stops material from entering and leaving [a] the hollow c-weight hull;

a swivel connected to said leader hook eye loop;

a snap connected to said swivel; and

a horizontal unilateral three-prong hook connected to said snap, swivel, and leader, said horizontal unilateral three-prong hook has a bent eye and shank in the same plane as a vertical center hook barb and a symmetrical pair of outer hook barbs which are disposed within a 180 degree section, this placement of the barbs causes the hook to lay horizontally and allows said hook to slide upon [the] a lake bottom without being caught on debris and to flip upright when the leader is being reeled.

52. The bottom fish rig of claim 51 wherein:

said first movement stop is comprised of crimped split shot; and

said second movement stop is comprised of crimped split shot.

53 A bottom fish rig of claim 51 [comprising] wherein:

[an elongated leader having two opposite ends, a leader hook end and a leader line end, said hook end having a] the leader hook loop is formed by a knot therein, [said line end having a] and the leader line loop [leader] is formed by a knot therein.

54. The bottom fish rig of claim 51 wherein:

said c-weight having said hollow c-weight hull that could be removed and reinserted without cutting said leader;

said hollow c-weight hull having a c-weight hull plug;

said hollow c-weight hull having an adjacent first end with a first slot connected to said first bore on one side;

said hollow c-weight hull having an adjacent second end with a second slot connected to said second bore on the opposite side;

said hollow c-weight hull having a central longitudinal groove connecting said first bore, said c-weight hull and said second bore; and

said hollow c-weight hull having an external central longitudinal groove therein for allowing the c-weight to be fixedly connected to said

substances or material to attract fish with the contents].

58. In combination, the bottom fish rig of claim 51 [further comprising] wherein:

said removable sliding c-weight [affiliated with] having a hollow c-weight hull having a c-weight hull hole and having a c-weight hull hole plug that stops material from entering and leaving a hollow c-weight hull;

said removable sliding c-weight having a hollow c-weight hull made of various volumes and of many substances including lead, lead with a skin from electroplating, spraying, dipping, lead with a coating of zinc orthophosphate, paint, latex, vinyl, nylon, wax, gum, rubber, rubber composite, fiberglass polymer, harden tar, with or without a sealer, polymer based composite material, and also a mixture thereof;

said removable sliding c-weight having a hollow c-weight hull made of various volumes and of many non-lead substances including different alloys of iron, steel, zinc, aluminum, tin, brass, bronze, ferrotungsten, and combinations thereof, and recyclable mixtures, plastic, synthetic containers, compressed wood, waxed products, epoxy, glue, rubber, frozen fluids[, and the like; and]

[said removable sliding c-weight having a hollow c-weight hull in which small holes could be drilled into the c-weight hull by the fisherman to attract fish with the contents].

57. In combination, the bottom fish rig of claim 51 [further comprising] wherein:

said removable sliding c-weight with a hollow c-weight hull having a c-weight hull hole and having a c-weight hull hole plug that stops material from entering and leaving a hollow c-weight hull;

said removable sliding c-weight with a hollow c-weight hull having a c-weight hull hole in which small objects and different substances could be inserted into the c-weight hull hole [such as] including sand, clay, pebbles, stones, glass, ceramics, brick, silicone, plastic, cement, epoxy, glue and including any from the group consisting of pieces of metal, lead pellets and lead substitutes [such as] including different alloys of iron, steel, aluminum, tin, brass, bronze, zinc, nickel, bismuth, and recyclable byproducts, [and the like;] and

said removable sliding c-weight with a hollow c-weight hull having a c-weight hull hole in which dense material with specific gravity heavier than water is inserted with different fluids including water with dissolved products, pheromones, scents, flavors, blood, egg, grounded fish parts, poultry, beef liver, insect parts, fish attractants, fruit, sugar, jelly, cheese, bread, food products[, and the like]; and

whererin the [said removable sliding c-weight having a] hollow c-weight hull [in which] includes small through holes [could be drilled into the c-weight hull by the fisherman] to allow passage of the objects,

leader.

55. The bottom fish rig of claim 51 wherein:

said c-weight having said hollow c-weight hull that could be removed and reinserted without cutting said leader;

said hollow c-weight hull having a c-weight hull plug;

said hollow c-weight hull having an adjacent first end with a first slot connected to said first bore on one side ;

said hollow c-weight hull having an adjacent second end with a second slot connected to said second bore on the opposite side;

said hollow c-weight hull having adjacent central bores in said first end and said second end to allow the leader to slide freely; and

said hollow c-weight hull having an adjacent first end with an inclined first slot and on the opposite side said second end with an inclined second slot to hinder the leader from working its way out of the c-weight.

56. The bottom fish rig of claim 51 [further comprising] <u>wherein</u>:

said hollow c-weight hull having a c-weight hull plug;

said hollow c-weight hull having adjacent central bores in said first end and said second end to allow the leader to slide freely within; and

said hollow c-weight hull having adjacent central bores in said first end and said second end without any slots, [gasp] <u>gaps</u> and spaces on the sides of the bores.

The Claims All Distinguish Over The References

The three independent claims, and hence all claims, distinguish over the references under Sec. 102 because they recite a new bottom fish rig with different embodiments for an unique removable sliding c-weight and different embodiments for the new horizontal unilateral 3-prong hook.

The Office Summary Action had a Notice of References Cited. Each of these patents have been examined and discussed in the following parts of this section for differences from this immediate patent application for the bottom fish rig.

U.S. Patent No. 5,887,381 to Stephenson has a fishing rig with a free sliding weight, a flexible leader line, sliding glass or plastic beads and swivel connectors to either end of the leader line. The sliding weight and beads move freely to make a clacking noise to attract fish. Stephenson's Carolina rig is shaped differently than the bottom fish rig and does not have movement stops, a c-weight or a horizontal unilateral 3-prong hook.

The device for casting small lures and files by Halterman, U.S. Patent No. 5,678,351, has a leading section, an intermediate weighted section and a trailing section consisting of a leader and a fly. The intermediate weighted section consists of a core of sticky filter tape or mounting tape that secures the weighted section to make a static casting loop between the leading section and trailing section. Halterman's device looks different, is intended to work at the surface and is not like the bottom fish rig by not having a sliding or removable c-weight, movement stops and a horizontal unilateral 3 prong hook.

Rayburn invented a casting float with line stop, U.S. Patent No. 4,696,125, that is intended to work on or near the surface. Rayburn's casting float is a hollow-shelled cylinder with various line receiving openings. Rayburn uses a sliding bead to separate the casting float from the line stop, a flat plastic plate. Rayburn's casting float does not resemble the bottom fish rigs sliding c-weight. Rayburn's patent does not Illustrate the use of a horizontal unilateral 3-prong hook, a swivel, a leader and a sliding c-weight that is easily attached and removed from the line and is restricted to a limited area by movement stops.

A fishing rig assembly patent was granted to Manno, U.S. Patent No. 4,209,933. Manno's complicated minnow rig relies upon an unique T-shaped wire eyelet projection to attach two lines to a sinker. At the end of the first line, a fish hook is attached by a line to a complex convoluted T-shaped single barb hook. Manno's minnow rig has key components that do not resemble the leader, the removable c-weight, movement stops and a horizontal unilateral 3 prong hook of the bottom fish rig.

U.S. Patent No. 3,701,212 to Gilliam is a salt water sinker. Gilliam's oval sinker resembles an egg sinker with a cut-out central bell shaped protrusion having locking arms

on opposite sides that are crimped over the fishing line. Although Gilliam's salt water sinker is detachable, it has a different shape and means of connecting to the fishing line than the removable sliding c-weight. The bottom fish rig is different with a leader, movement stops, swivel and a horizontal unilateral 3 prong hook.

Shriver was granted a bait positioning fishing device patent, U. S. Patent No. 3,118,245. Shriver soldered 2 rods to make 4 perpendicular elongated shift members. A fish hook attachment means was connected by a reverted loop at one end; the other end is attached to the fishing line and a weight. The cross-shaped bait positioning fishing device rests on the bottom and the rod like members deflect weeds away while the line is being reeled. The bottom fish rig is different with a leader, a removable c-weight, movement stops and a horizontal unilateral 3 prong hook.

A removable fishing sinker by Baron, U.S. Patent No. 3,096,599, has a body made of heavy metal with a sleeve made of a light plastic material in which fishing line is inserted and jammed between a sleeve and sinker body into a long central slot. Although the egg-shaped removable fishing sinker could slide freely over the fishing line or could be mounted fixed on a fishing line, Baron's sinker has at least 3 individual components, in contrast to the bottom fish rig's one piece removable c-weight, excluding the hull plug of one embodiment. The removable c-weight is more durable, costs less and is easier to produce than the removable fishing sinker. The bottom fish rig is different, with a leader, removable c-weight, movement stops, swivel and a horizontal unilateral 3-prong hook.

U.S. Patent No. 2,766,549, a sinker and leader assembly by Dickerson discloses at the end a snap for lures and hooks, a swivel, a wire through the first length connected to another swivel, a fixed bead, and another wire passing through the axial bore of a sliding egg sinker and a loop. Dickerson has to disconnect the assembly from the fishing line to remove the egg sinker which is pulled down the main shank of the wire and over the eye. The bottom fish rig is an improvement by being easier to produce than Dickerson's assembly, and by having a c-weight that could be removed without detaching the rig from the fishing line. The bottom fish rig is different with movement stops to prevent the c-weight from interfering with the hook and inhibit the c-weight from sliding over the leader loop and up the fishing line. The bottom fish rig is different with unique components, a removable c-weight and a horizontal unilateral 3 prong hook while other components on the leader are located in different positions and perform tasks differently than their counterparts in the Dickerson assembly.

U.S. Patent No. 2,177,007 to Smith discloses a complicated releasable sinker having weigh changing means. In Smith's patent the sinker is released to slide down the line an encounter the lure. Smith has a cylindrical bore slip sinker or egg sinker held into a carrier tube by a frictional locking device that fits into a slot in the wall of the egg sinker. Beside having a squeezed split sinker stop member, Smith's patent is different from the bottom fish rig which has a leader, removable c-weight, movement stops, swivel and a horizontal unilateral 3 prong hook.

Pesso was issued U.S. Patent No. 2,019,630 for fishing tackle consisting of a

surface float. Pesso's hollow float does not work like the hollow removable c-weight and the patent does not have any similar features with the bottom fish rig.

U.S. Patent No. 1,883,574 to Cleeland discloses a sinker that attaches to fishing line without parting the line. Cleeland's lead sinker has a streamline body with wire coils on each end and a frictional groove spiral around the body; Cleeland's patent does not have a central bore and does not slide. Cleeland's patent does not have a leader, removable c-weight, movement stops, swivel and a horizontal unilateral 3 prong hook.

A fish hook patent, U. S. Patent No. 1,208,936, was granted to Henry England in 1916. As illustrated in the artwork England's fish hook is designed to dangle from a float to avoid weeds and is not intended to fish on the bottom. Due to its poor construction, England's fish hook has limited snag resistance with one depressible springably weed guard for its small center hook. The 2 long hooks do not have weed guards and are not bent inward or downward to resist snagging as compared to the positioning of the horizontal unilateral 3 prong hook in the bottom fish rig which also avoids injuries. The shank of the horizontal unilateral 3 prong hook of the bottom fish rig is sturdier or stronger by being three shanks fused together as compared to a short single weak shank in England's fish hook. Another difference is the eye of the England's fish hook is in the same plane as the 3 shanks, however, in the bottom fish rig the eye of the horizontal unilateral 3 prong hook is elevated on an incline at approximate the same level or height as the center middle barb, which is important in orienting the horizontal unilateral 3 prong hook upright when being used. Since England's fish hook is weak it needs a cross-piece between the 2 longer hooks, which is not necessary or a feature in the horizontal unilateral 3 prong hook. The bottom fish rig is different than England's patent, with a leader, removable c-weight, movement stops, swivel and a horizontal unilateral 3 prong hook. None of the references cited show all of the elements of the bottom fish rig, or the removable sliding c-weight or the horizontal unilateral 3 prong hook.

Since the independent claims both recite features which are not present in any reference, applicant submits that these claims, and hence all of the dependent claims, clearly recite novel physical features which distinguish over any and all references.

The Novel Physical Features Of The Claims Provide New And Unexpected Results And Hence Should Be Considered Unobvious, Making The Claims Patentable

Applicant submits that the above recited novel features in the independent claims, and hence in all claims, provide new and unexpected results and hence should be considered unobvious, making the claims patentable.

Specifically by making the bottom fish rig with embodiments of either a horizontal unilateral 3 prong hook or the removable sliding c-weight are novel features. None of the prior-art patents can provide these new and unexpected results.

Since the novel features of applicant's bottom fish rig employing the any of the embodiments of the removable sliding c-weight or the horizontal unilateral 3 prong hook provide these new and unexpected results over any reference, applicant submits that these

new results indicate unobvious and hence patent ability. Accordingly applicant respectfully requests reconsideration of the objections and allowance of the present application on its merits with the new claims.

Additional Reasons Mitigate In Favor Of Unobviousness

In addition to the above new and unexpected results, applicant submits that additional reasons mitigate in favor of patent ability as follows:

Unrecognized Problems: Up to now, insofar as applicant is aware, the art contained no indication of the desirability of providing a bottom fish rig with a leader, removable c-weight, movement stops, swivel and a horizontal unilateral 3 prong hook that resists injuries and snagging and whose major components are easily removed and replaced.

Crowed Art: The present invention is in a crowed art affiliated with fishing tackle. It is well recognized that in a crowed art, even a small step forward is worthy of patent protection. While the present invention is submitted to be far more than a small one, nevertheless this factor mitigated in applicant's favor.

Long-Felt But Unsolved Need. The present invention solves a long-existing but unsolved need and therefore is submitted to be worthy of patent protection. Specifically, although fishing rigs have been inuse for many years, they had numerous inherent disadvantages, as stated in the prior-art section of the present specification. Users suffered from the inability to remove various components of their fishing rigs without cutting their fishing line and loosing valuable time in making a new rig. The present invention addresses these and other features, thereby solving a long-felt need in this area.

Unsuggested Combination: The need for the prior art references themselves to suggest that they can be combined is well-known. E.g., In re Senaker, 217 U.S.P.Q. 1, 6 (CAFC 1983):

> "[P]rior art references in combination do not make an invention obvious unless something in the prior art referenced would suggest the advantage to be derived from combining their teaching."

The suggestion to combine the references should come from the prior art, rather than from applicant. As was forcefully stated in Orthopedic Equipment Co Inc. v. United Sates, 217 U.S.P.Q 193, 199 (CAFC 1983):

> It is wrong to use the patent in suit [here the patent application] as a guide through the maze of prior art references, combining the right references in the right way to achieve the result of the claims in suit [here the claims at issue]. Monday morning quarterbacking is quite improper when resolving the question of no obviousness in a court of law [here the PTO]."